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Japanese Salticid Spiders of the Genera *Euophrys* C. L. KOCH and *Talavera* PECKHAM et PECKHAM (Araneae: Salticidae)

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池田博明[1)]：日本産カタオカハエトリグモ属およびヒメスジハエトリグモ属（クモ目：ハエトリグモ科）の分類学的研究

Abstract Japanese salticid spiders of the genera *Euophrys* C. L. KOCH, 1834, and *Talavera* PECKHAM et PECKHAM, 1909, are revised. After an examination of many specimens from Japan, four species of the genus *Euophrys* were recognized, that is, *Euophrys erratica* (WALCKENAER, 1825), *E. iwatensis* BOHDANOWICZ et PRÓSZYŃSKI, 1987, *E. frontalis* (WALCKENAER, 1802) and *E. kataokai* sp. nov. One species of the genus *Talavera, T. trivittata* (SCHENKEL, 1963) was recognized. All the species are described and illustrated.

BÖSENBERG and STRAND (1906) described three new species of the genus *Euophrys* C. L. KOCH, 1834, from Japan, that is, *E. aninotatus, E. breviaculeis* and *E. undulatovittata*. In the same work, DÖNITZ and STRAND (1906) described one new species, *E. heliophaniformis*, ad. int.

YAGINUMA (1971) identified a specimen from Iwate Prefecture with *E. frontalis* (WALCKENAER, 1802), and then KATAOKA (1978) reported the species with figures and description in Japanese. However, the male first legs of the Japanese specimens were different from those of true *E. frontalis*. BOHDANOWICZ and PRÓSZYŃSKI (1987) described *E. iwatensis* as new species from Iwate Pref., Japan, and synonymized *E. aninotatus* with *Phintella castriesiana* (GRUBE, 1861), and *E. breviaculeis* and *E. undulatovittata* with *Pseudicius vulpes* (GRUBE, 1861).

SHINKAI and TAKANO (1987) showed fine coloured pictures of *E. trivittatus* SCHENKEL, 1963 and *E. herbigrada* (SIMON, 1871) without description. The record of the latter species was based on a misidentification. MATSUDA (1991) redescribed Japanese *E. erratica* (WALCKENAER, 1825) and *E. iwatensis* based on the specimens from Hokkaido.

LOGUNOV, CUTLER and MARUSIK (1993) revised the genus *Euophrys* of Siberia and the Russian Far East and described three new species. They recognized a Japanese species as new, however, they could not describe the species for lack of palps of specimen. LOGUNOV (1992) transferred *E. trivittata* from the original genus to *Talavera* PECKHAM et PECKHAM, 1909.

I studied many specimens of spiders of the genus *Euophrys* newly obtained from

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Japan, and recognized four species, that is, *E. erratica* (WALCKENAER, 1825), *E. iwatensis* BOHDANOWICZ et PRÓSZYŃSKI, 1987, *E. frontalis* (WALCKENAER, 1802) and a new species to be described under the name of *E. kataokai* misidentified by YAGINUMA (1971) as *E. frontalis*. I also report one species of the genus *Talavera, T. trivittata* SCHENKEL, 1963, from Japan.

Euophrys heliophaniformis was never recognized since its originl description.

The type specimens and some other specimens used in this paper are deposited in the collection of the National Science Museum (Nat. Hist.), Tokyo.

The following abbreviations are used: ALE, anterior lateral eye; AME, anterior median eye; PLE, posterior lateral eye; PME, posterior median eye. The distances between eyes are presented with a dash, *e.g.*, ALE-ALE indicates distance between ALEs.

Genus ***Euophrys*** C. L. KOCH, 1834

Euophrys C. L. KOCH, 1834, p. 123, pls. 7-8. Type species: *Attus frontalis* WALCKENAER, 1802, Palearctic.

Diagnosis. Small spiders, total length about 2-4 mm, with a pale coloured pattern on the dark opisthosoma. Prosoma: Rather high, thoracic part dilated, a third or a quarter longer than the cephalic part which is usually plane and little inclined, limited by a defined impression, cut by a small, very short longitudinal stria; thoracic part often having some diverging striae faintly indicated; clypeus narrow, sternum oval. Eyes: AME>ALE>PLE>PME. Opisthosoma: Oval, length 1.5-2 times width. Male palpal organ with a meandering canal on the surface of bulbus, embolus frequently coiled, sometimes with a conductor. Spermathecae of female in the form of oval reservoirs, copulatory canals varying in length in each species. Leg IV the longest, leg II the shortest; first and sometimes second pairs more robust than the others, particularly in the males.

Distribution. 131 species were known under this genus and distributed widely among the world (PRÓSZYŃSKI, 1990). LOGUNOV (1992) recently transferred 4 species from *Euophrys* to *Talavera*.

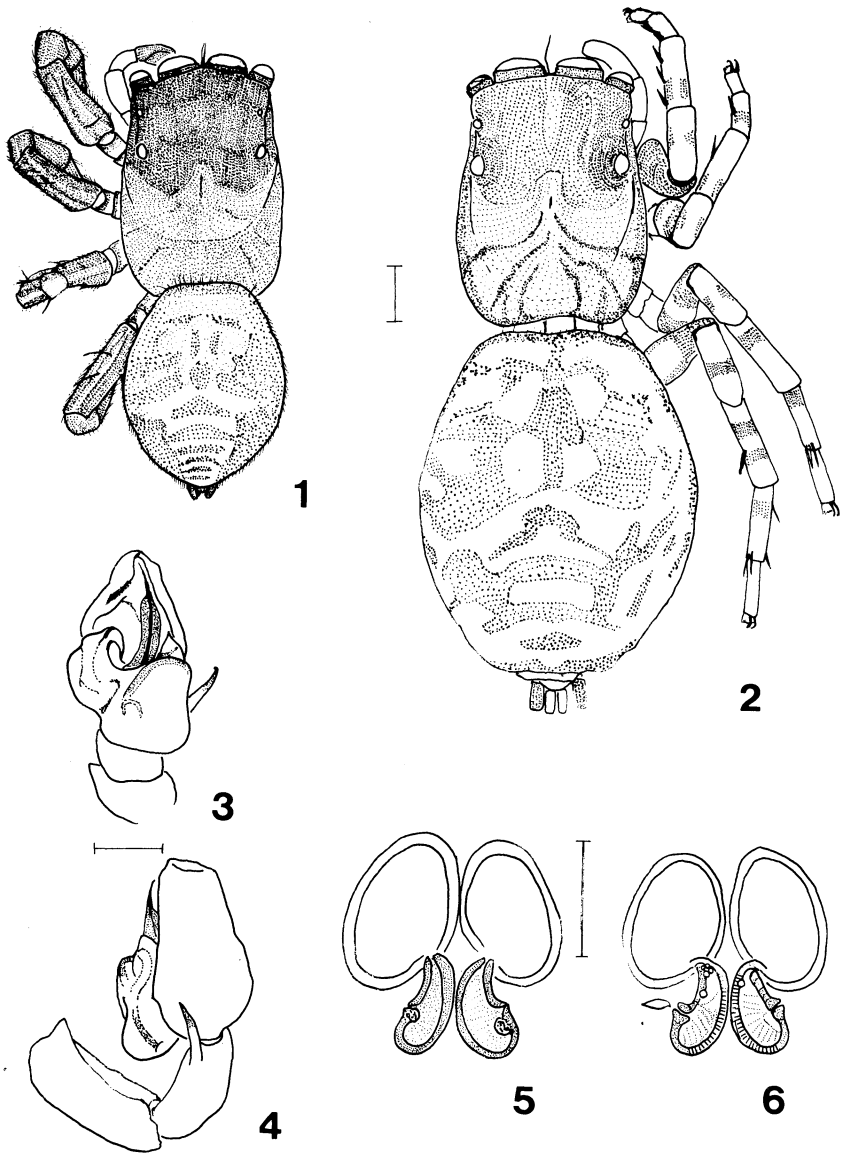
Euophrys erratica (WALCKENAER, 1825)
(Figs. 1-6)

Attus erraticus WALCKENAER, 1826, p. 46.

Euophrys erratica: SIMON, 1937, pp. 1180, 1253, figs. 1853-1855.——LOCKET & MILLIDGE, 1951, p. 226, figs. 110G, 111F.——JONES, 1984, p. 151.——ROBERTS, 1985, p. 124, fig. 51b.——MATSUDA, 1991, pp. 63-67, figs. 1-7, 14.——HEIMER & NENTWIG, 1990, pp. 498-500, figs. 1331.——LOGUNOV *et al*., 1993, pp. 104-106, fig. 2.

Specimens examined. 1 ♂ 1 ♀, Horobetsu River, riverside, Shari-machi, Shari-gun, Hokkaido, Japan, 18-25-VI-1989, H. TAKECHI leg.: 1 ♂, Takano-machi, Hiba-gun, Hiroshima Pref., 4-VI-1988, Y. IHARA leg. (NSMT-Ar 3359); 1 ♂, Shinzaike, Shingo-cho, Atetsu-gun, Okayama Pref. 8-V-1995, K. NOJIMA leg.

Description. Measurement of 1 ♂ from Hiroshima and 1 ♀ from Hokkaido (in



Figs. 1-6. *Euophrys erratica* (WALCKENAER, 1825).—1, Male, dorsal view; 2, female, dorsal view; 3, male palp, ventral view; 4, same, retrolateral view; 5, female genitalia, ventral view; 6, same, dorsal view. (Scales: 1-2, 0.4 mm; 3-6, 0.2 mm.)

mm). Body length ♂ 3.20, ♀ 4.19; prosoma length ♂ 1.57, ♀ 1.76, width ♂ 1.14, ♀ 1.31, height ♂ 0.70, ♀ 0.80; opisthosoma length ♂ 1.41, ♀ 2.43, width ♂ 1.22, ♀ 2.05. Eye fields: ALE-ALE ♂ 1.00, ♀ 1.18, PLE-PLE ♂ 0.94, ♀ 1.12, ALE-PLE ♂ 0.64, ♀ 0.74, ALE-PME ♂ 0.32, ♀ 0.38, AME diameter ♂ 0.30, ♀ 0.35; ratio ALE/AME ♂ 0.66, ♀ 0.68, ALE/PLE ♂ 1.39, ♀ 1.36, PME/PLE ♂ 0.28, ♀ 0.27.

Table 1. Measurement of leg segments of *Euophrys erratica* (in mm; ♂/♀).

Leg	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	0.72/0.82	0.53/0.50	0.74/0.67	0.45/0.48	0.34/0.32	2.78/2.79
II	0.72/0.83	0.43/0.50	0.42/0.58	0.37/0.40	0.27/0.32	2.21/2.63
III	0.96/1.09	0.43/0.50	0.64/0.77	0.45/0.56	0.29/0.40	2.77/3.32
IV	0.94/1.12	0.38/0.54	0.62/0.80	0.56/0.75	0.40/0.42	2.90/3.63

Table 2. Spination of legs of *Euophrys erratica* (dorsal/ventral; none= no spine, r=retrolateral, p=prolateral).

Leg		Femur	Tibia	Metatarsus
I	♂	0-1-1-1•1p/none	none/2-2-2	none/2-2
	♀	0-1-1-1•1p/none	none/2-2-2	none/2-2
II	♂	0-1-1-2p/none	none/2-2-2	none/2-2
	♀	0-1-1-2p/none	0-1p-1/1r-2-2	none/2-2
III	♂	0-1-1-1p/none	2-2-0/1p-0-2	2-2/0-0-2p•2r
	♀	0-1-1-1•1p/none	2-2-0/1p-0-1p	2-2/1p-0-2p•2r
IV	♂	0-1-1-1/none	0-2-2-0/1p-0-2	2-1r-2/1p-0-2p•2r
	♀	0-1-1-1/none	0-1r-2-0/1p-0-2	2-1r-2/1p-0-2p•2r

Legs. Length of legs of the same specimens as shown in Table 1. Spination of legs of the same specimens as shown in Table 2.

Male palp (Figs. 3-4) with a strong hook-like embolus in a deep pocket of the tegulum and a long, rather wide tibial apophysis with a bent tip. Femur, patella and tibia yellow, cymbium and tibial apophysis dark brown.

Female genitalia (Figs. 5-6) with two oval genital openings and spermathecae closely together and visible through integument.

Coloration and markings (Figs. 1-2). Male: Prosoma dark brown with white hairs, eyes surrounded with white hairs and brown setae. Clypeus brown with long brown setae at the central. Sternum brown with white hairs, labium and maxillae brown with yellow margin, chelicerae brown. Opisthosomal dorsum whitish brown with brown shevrons and brown spots with white hairs, anterior margin dark brown with brown setae. Venter of opisthosoma brown. Legs I and II: Coxa and femur dark brown, patella, tibia and metatarsus brown, tarsus yellowish brown. Legs III and IV: Same colour as leg I except for metatarsus yellowish brown with proximal and distal parts brown.

Female: Prosoma dark brown with white hairs beneath PLE. Anterior eyes edged with white hairs. Clypeus brown with brown setae at the central part. Sternum brown with black hairs, labium and maxillae brown with yellow margin, chelicerae brown. Opisthosomal dorsum whitish brown with brown shevrons and brown spots with marginal white hairs. Venter of opisthosoma whitish brown. Leg I: Coxa and femur brown, patella yellow brown with center brown, tibia and metatarsus yellow brown with brown proximal part, tarsus yellowish brown. Other legs as same as leg I except for femur of leg IV proximally and distally brown.

Distribution. Japan (Hokkaido, Honshu); Holarctic.

Remarks. Euophrys erratica closely resembles *Euophrys iwatensis* BOHDANOWICZ et PRÓSZYŃSKI, 1987, but can be distinguished from the latter by the structure of male palp and female genitalia. Having examined Siberian specimens, LOGUNOV *et al.* (1993) pointed out that females of *Euophrys erratica* and *E. iwatensis*

are distinguishable from each other by the colour of the first femur. They described that *E. iwatensis* has a completely brown femur I, while *E. erratica* has a yellow femur with two brown bands on the ends of the segment. However, I could not recognize the difference between both the species with Japanese specimens, because the first femur of *E. erratica* from Japan was also brown.

Euophrys iwatensis BOHDANOWICZ et PRÓSZYŃSKI, 1987
(Figs. 7-12)

Euophrys erratica: PRÓSZYŃSKI, 1979, p. 306, figs. 64-68.——FLANCZEWSKA, 1981, p. 192, figs. 11-13. ——PAIK, 1987, pp. 12-14, figs. 40-54. [Nec *E. erratica* (WALCKENAER, 1852).]
Euophrys iwatensis BOHDANOWICZ et PRÓSZYŃSKI, 1987, pp. 49, 52-53, figs. 18-26.——CHIKUNI, 1989, pp. 149, 276.——MATSUDA, 1991, pp. 65-67, figs. 8-13, 15.——LOGUNOV *et al.*, 1993, pp. 106-107, fig. 3.

Specimens examined. 1 ♀, Nuruyu-onsen, Azuma-machi, Shinobu-gun, Fukushima Pref., 11-VI-1986, K. KUMADA leg. (NSMT-Ar 3360); 1 ♂, Tokyo University Forest Experimental Station at Tanashi, Tanashi-shi, Tokyo., 14-V-1995, A. SHINKAI leg. (NSMT-Ar 3361); 1 ♀, Unkoh-ji, Seto-shi, Aichi Pref., 14-V-1991, K. OGATA leg. (NSMT-Ar 3362); 1 ♀, Aoyagi, Kamo-cho, Tomata-gun, Okayama Pref., 4-VIII-1990, K. NOJIMA leg; 2 ♀, Kurami, Kamo-cho, Tomata-gun, Okayama Pref., 28-VI-1991, K. NOJIMA leg.

Description. Measurement of 1 ♂ from Tokyo and 1 ♀ from Fukushima (in mm). Body length ♂ 3.04, ♀ 3.04; prosoma length ♂ 1.06, ♀ 1.76, width ♂ 1.17, ♀ 1.30, height ♂ 0.74, ♀ 0.77; opisthosoma length ♂ 1.57, ♀ 1.28, width ♂ 1.28, ♀ 1.12. Eye fields: ALE-ALE ♂ 1.04, ♀ 0.88, PLE-PLE ♂ 0.98, ♀ 0.86, ALE-PLE ♂ 0.64, ♀ 0.56, ALE-PME ♂ 0.32, ♀ 0.26, AME diameter ♂ 0.32, ♀ 0.37; ratio ALE/AME ♂ 0.50, ♀ 0.61, ALE/PLE ♂ 1.25, ♀ 1.17, PME/PLE ♂ 0.25, ♀ 0.25.

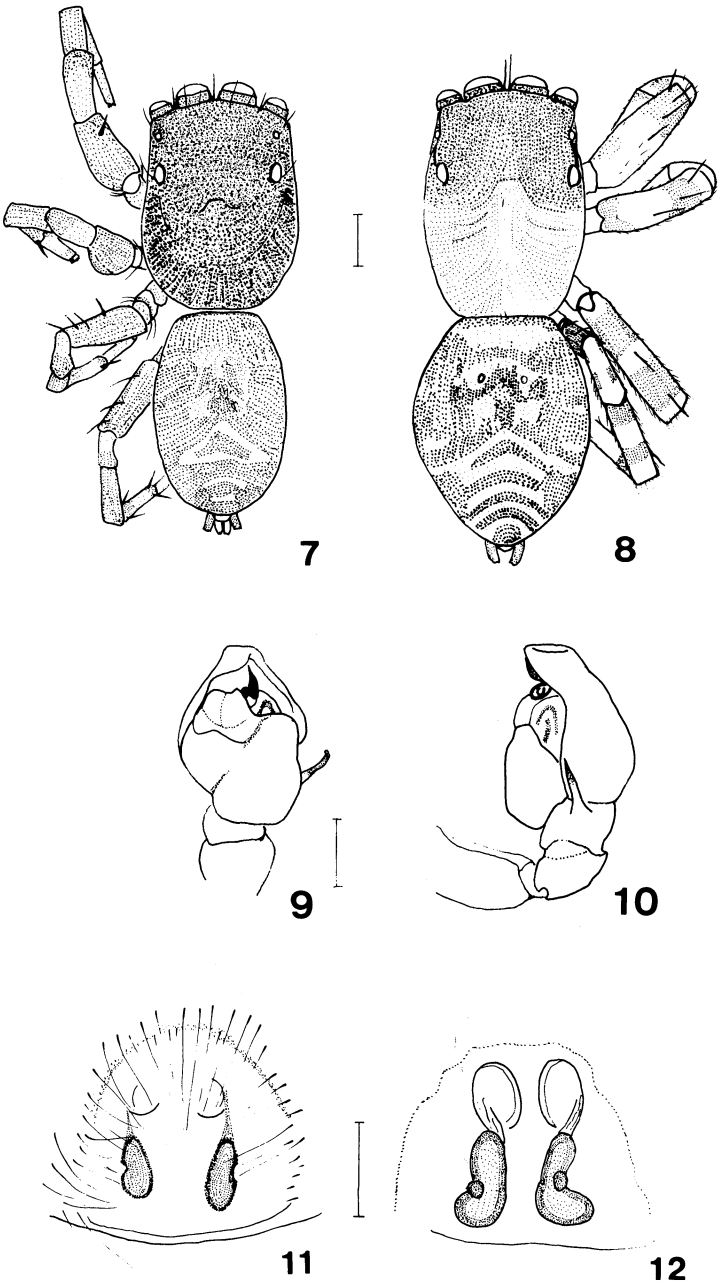
Legs. Length of legs of the same specimens as shown in Table 3. Spination of

Table 3. Measurement of leg segments of *Euophrys iwatensis* (in mm; ♂/♀).

Leg	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	0.96/0.93	0.64/0.56	0.74/0.66	0.45/0.45	0.35/0.32	3.14/2.92
II	0.78/0.90	0.48/0.50	0.54/0.54	0.40/0.45	0.30/0.32	2.50/2.71
III	0.99/1.10	0.56/0.56	0.54/0.59	0.56/0.61	0.40/0.40	3.05/3.26
IV	0.96/1.15	0.48/0.54	0.67/0.80	0.64/0.77	0.40/0.48	3.15/3.74

Table 4. Spination of legs of *Euophrys iwatensis* (dorsal/ventral; none= no spine, r=retrolateral, p=prolateral).

Leg		Femur	Tibia	Metatarsus
I	♂	0-1-1-1•1p/none	none/1r-2-2	none/2-2
	♀	0-1-1-1•1p/none	none/2-2-2	none/2-2
II	♂	0-1-1-1/none	none/1r-1r-1r	1p-1p/2-2
	♀	0-1-1-1•1p/none	0-1p-0/1r-2-2	none/2-2
III	♂	0-1-1-1•1p/none	0-2-0/1p-0-2	2-2/2-0-2p•2r
	♀	0-1-1-1•1p/none	2-0-2/0-1p-0	2-2/2-0-2p•2r
IV	♂	0-1-1-1/none	0-2-2-0/0-1p-2	2-2/2-2-2p•2r
	♀	0-1-1-1/none	0-2-0-2/0-1p-2	2-2/2-0-2p•2r



Figs. 7–12. *Euophrys iwatensis* BOHDANOWICZ et PRÓSZYŃSKI, 1987.——7, Male, dorsal view; 8, female, dorsal view; 9, male palp, ventral view; 10, same, retrolateral view; 11, epigynum; 12, female genitalia, dorsal view. (Scales: 7–8, 0.4 mm; 9–12, 0.2 mm.)

legs of the same specimens as shown in Table 4.

Male palp (Figs. 9–10) with a short embolus in a shallow depression of the tegulum and a long tibial apophysis with a bent tip. Distal parts of femur and patella yellow with many white hairs on dorsal surface, proximal parts of femur, tibia and cymbium and tibial apophysis black.

Female genitalia (Figs. 11–12) with indistinct, round genital openings and spermathecae far from each other and visible through integument.

Coloration and markings (Figs. 7–8). Male: Prosoma black, eyes surrounded with white hairs and orange hairs. Clypeus with white hairs and dark brown setae at the central part. Sternum brown with black hairs. Labium, maxillae and chelicerae dark brown with light margins. Opisthosomal dorsum dark brown with many black setae on anterior margin and marginal white hairs. Venter of opisthosoma dark brown covered with short black hairs. Legs: Tarsus brown, other segments dark brown.

Female: Prosoma dark brown with white, black and orange hairs, surroundings of eyes black with white hairs. Clypeus brown with white hairs and dark brown setae at the central part. Sternum brown with black hairs. Labium, maxillae and chelicerae brown , edged with pale brown. Opisthosomal dorsum brown or dark brown covered with white and black hairs, and black setae on anterior margin. Venter of opisthosoma brown, covered with black and brown hairs. Leg I: Coxa brown, femur brown with dark end, patella brown with dark center, tibia and metatarsus brown with dark proximal parts, tarsus brown. Other legs as same as leg I.

Distribution. Japan (Hokkaido, Honshu), Russia, Korea, China.

Remarks. Euophrys iwatensis resembles *Euophrys erratica*, but can be distinguished from the latter by the structure of male palp, especially the shape of embolus, and the female genitalia.

Euophrys frontalis (WALCKENAER, 1802)
(Figs. 13–15)

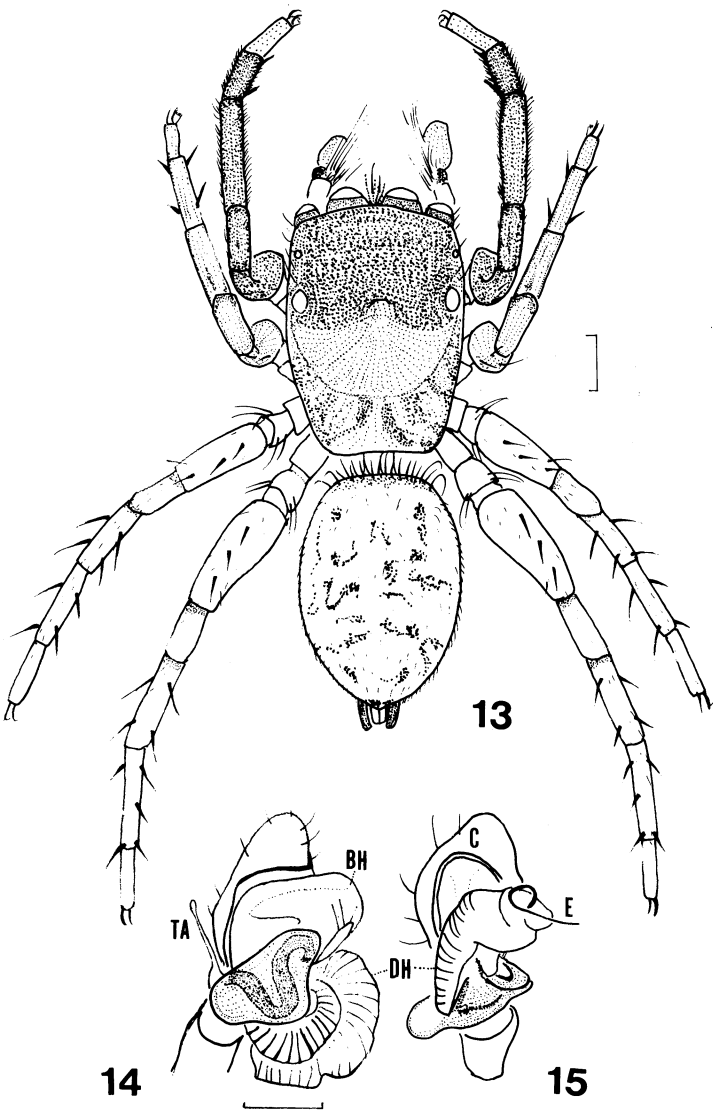
Aranea frontalis WALCKENAER, 1802, p. 246.
Euophrys maculata F. DAHL, 1926.——TULLGREN, 1944, p. 35, fig. 23.
Euophrys frontalis: SIMON, 1937, pp. 1172, 1176, 1251, fig. 1839.——LOCKET & MILLIDGE, 1951, p. 223, figs. 110A, D, 111B.——FLANCZEWSKA, 1981, p. 196, figs. 14–17.——JONES, 1984, p. 148.——ROBERTS, 1985, p. 122, fig. 50c, pls. 61–62.——LOGUNOV *et al.*, 1993, pp. 111–113, figs. 5, 10–11.——HEIMER & NENTWIG, 1990, pp. 498–500, fig. 1334.

Specimen examined. 1 ♂, Nagabushi Lake, Toyokoro-chô, Nakagawa-gun, Hokkaido, 27-VI-11-VII-1993, K. SHIBATA leg. (by pit fall trapping).

Description. Measurement of the only ♂ specimen examined (in mm). Body length 3.30; prosoma length 1.70, width 1.18, height 0.88; opisthosoma length 1.60, width 1.28. Eye fields: ALE-ALE 1.10, PLE-PLE 1.17, ALE-PLE 0.77, ALE-PME 0.34, AME diameter 0.29; ratio ALE/AME 0.72, ALE/PLE 1.18, PME/PLE 0.45.

Legs. Length of legs as shown in Table 5. Spination of legs as shown in Table 6.

Male palp (Figs. 14–15). The palps of the present specimen were expanded by the acetic acid in pit fall trap. LOGUNOV (1992) described the expanded palps of this species. Femur black, patella yellow, tarsus brown with many white setae on dorsoprolateral surface, cymbium brown.



Figs. 13–15. *Euophrys frontalis* (WALCKENAER, 1802).—13, Male, dorsal view; 14, male right palp expanded, ventral view; 15, male left palp expanded, ventral view. TA, tibial apophysis, E, embolus, DH, distal haematodocha, BH, basal haematodocha, C, cymbium. (Scales: 13, 0.4 mm; 14–15, 0.2 mm.)

Coloration and markings (Figs. 13, 28). Male: Prosoma brown with white and black hairs, surroundings of eyes black with white and black hairs. Anterior eyes edged with orange hairs. Clypeus without hairs, its central part brown with orange setae. Sternum, labium, maxillae and chelicerae brown. Opisthosomal dorsum yellowish

Table 5. Measurement of leg segments of *Euophrys frontalis* (♂; in mm).

Leg	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	1.02	0.50	0.88	0.58	0.42	3.40
II	0.88	0.48	0.48	0.45	0.40	2.69
III	1.06	0.53	0.77	0.61	0.48	3.45
IV	1.12	0.51	0.88	0.91	0.53	3.95

Table 6. Spination of legs of 1 ♂ of *Euophrys frontalis* (dorsal/ventral; none=no spine, r=retrolateral, p=prolateral).

Leg	Femur	Tibia	Metatarsus
I	0-1-1-1•1p/none	none/2-2-2	none/2-2
II	0-1-1-1•1p/none	0-1p-0/1r-1r-2	none/2-2
III	0-1-1-1•1p/none	0-2-2/0-1p-2	2-2/2-0-2p•2r
IV	0-1-1-1•1r/none	0-2-2/0-1p-2	2-2/2-0-2p•2r

white with black spots, covered with black hairs and weak white hairs, the anterior part with black setae and marginal black hairs. Venter of opisthosoma whitish yellow with short black hairs and weak white hairs. Leg I (Fig. 28): All segments black except for tarsus yellow brown and tibia with scale-like black setae on ventral surfaces. Leg II grey; other legs yellow.

Distribution. Japan (Hokkaido); Palearctic.

Remarks. Euophrys frontalis (WALCKENAER, 1802) was recently found from Hokkaido by M. MATSUDA.

Euophrys kataokai sp. nov.

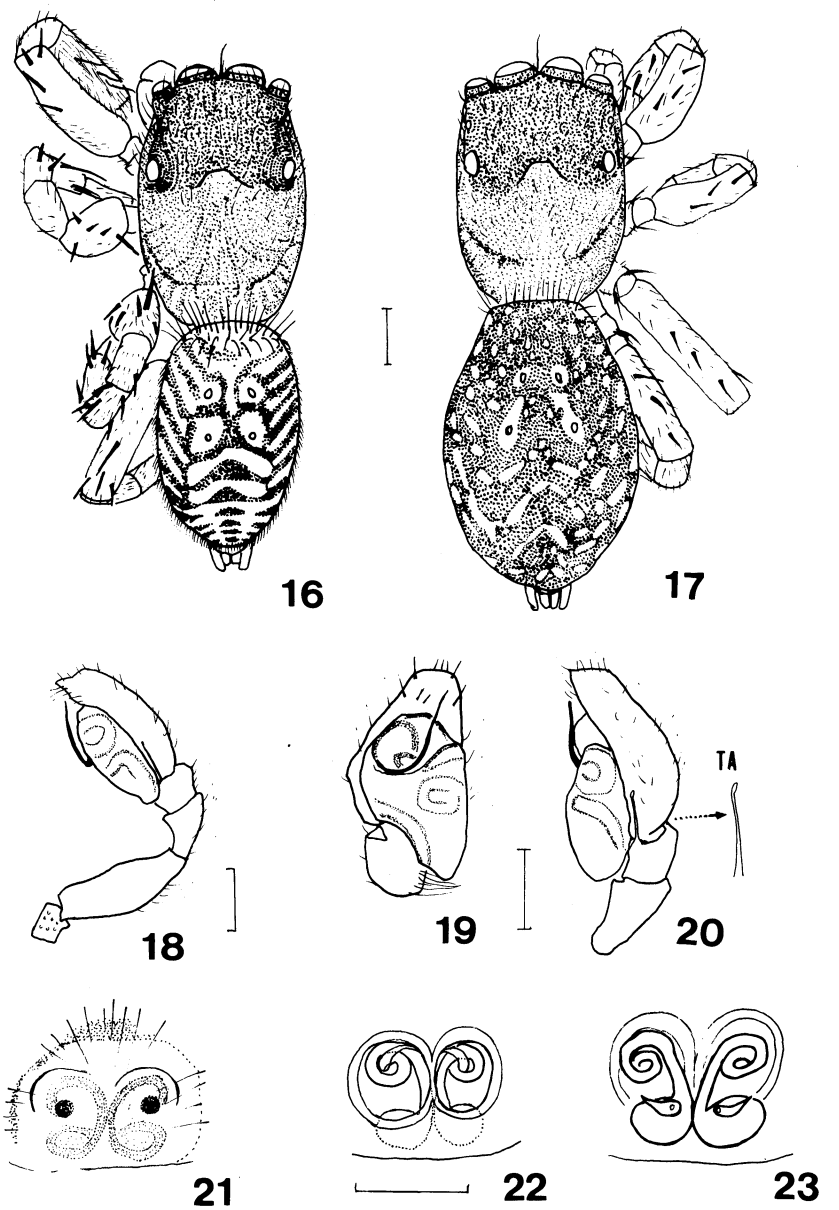
(Figs. 16-29)

Euophrys frontalis: YAGINUMA, 1971, p. 38.——KATAOKA, 1976, pp. 312-313, figs. 7-11.——YAGINUMA, 1986, p. 239, fig. 133-2.——CHIKUNI, 1989, pp. 149, 276, fig. 14.
Euophrys herbigrada: SHINKAI & TAKANO, 1987, p. 118.
Euophrys sp.: LOGUNOV *et al.*, 1993, pp. 118-119.

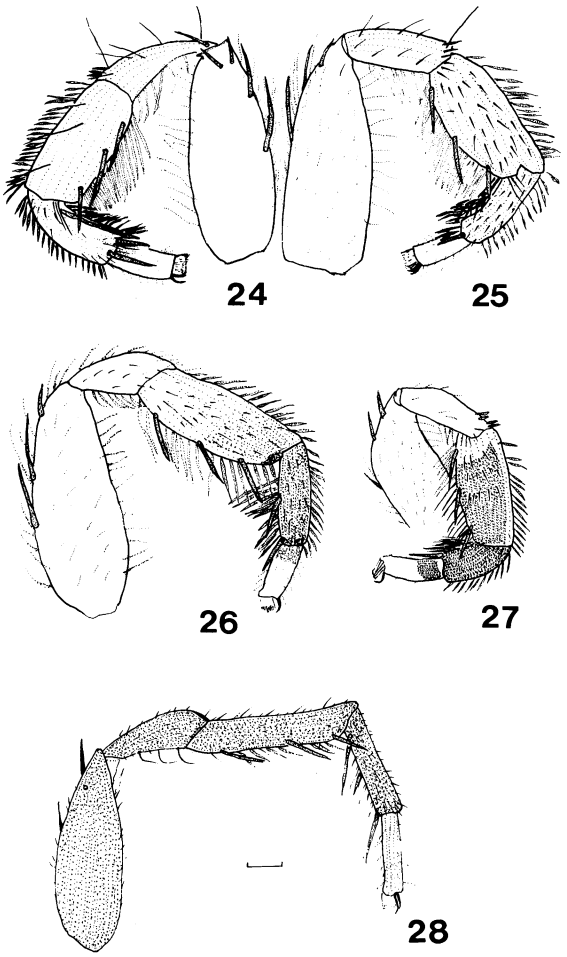
Holotype: ♂, Sagami River, riverside, Atsugi-shi, Kanagawa Pref., Japan, 4-V-1995, M. BAN leg. (NSMT-Ar 3363), allotype: ♀, same data as for the holotype (NSMT-Ar 3364); paratypes: 2 ♂, same locality and collector as for the holotype, 9-V-1995 (NSMT-Ar 3365).

Other specimens examined. 1 ♂, Nishikameari, Katsushika-ku, Tokyo, 23-V-1995, M. KASHIWAGURA leg. (NSMT-Ar 3366). 1 ♀, Shimo-oyamada, Takao-shi, Tokyo, K. KUMADA leg. (NSMT-Ar 3367). 1 ♂, Konan-ku, Yokohama-shi, Kanagawa Pref., 18-VI-1990, A. TANIKAWA leg. (NSMT-Ar 3368). 1 ♂, Noba, Yokohama-shi, Kanagawa Pref., 7-VI-1988, A. TANIKAWA leg. (NSMT-Ar 3369). 1 ♂, Noba, Yokohama-shi, Kanagawa Pref., 19-V-1990, A. TANIKAWA leg. (NSMT-Ar 3370). 3 ♂, Nanasawa, Atsugi-shi, Kanagawa Pref., 9-V-1979, K. KUMADA leg. (NSMT-Ar 3371). 2 ♂, same locality and collector as for the holotype, 5-VI-1995, (NSMT-Ar 3372). 1 ♂, Tenryu-shi, Aichi Pref., 26-V-1994, Y. ITAKURA leg. (NSMT-Ar 3373).

Description. Measurement of holotype and allotype (in mm) (variation of all specimens in parentheses). Body length ♂ 3.39 (2.69-3.39), ♀ 3.39 (3.20-3.52);



Figs. 16–23. *Euophrys kataokai* sp. nov.—16, Male, dorsal view; 17, female, dorsal view; 18, male palp, retrolateral view; 19, same, ventral view; 20, same, retrolateral view; 21, epigynum; 22, female genitalia, ventral view; 23, same, dorsal view. TA, tibial apophysis. (Scales: 16–17, 0.4 mm; 18–23, 0.2 mm.)



Figs. 24–28. Male first legs of *Euophrys* spp.—24, *E. kataokai* (pale specimen from Atsugi), prolateral view; 25, same, retrolateral view; 26, *E. kataokai* (holotype), retrolateral view; 27, *E. kataokai* (dark specimen from Tenryu), retrolateral view; 28, *E. frontalis*, retrolateral view. (Scales: 0.2 mm.)

prosoma length ♂ 1.82 (1.47–1.73), ♀ 1.76 (1.44–1.76), width ♂ 1.28 (1.06–2.43), ♀ 1.22 (0.98–1.22), height ♂ 0.82 (0.64–0.82), ♀ 0.67 (0.58–0.70); opisthosoma length ♂ 1.68 (1.26–1.76), ♀ 2.02 (1.73–2.02), width ♂ 1.12 (0.90–1.22), ♀ 1.47 (1.41–1.44). Eye fields: ALE–ALE ♂ 1.12 (0.88–1.12), ♀ 1.04 (0.93–1.04), PLE–PLE ♂ 1.18 (0.96–1.18), ♀ 1.09 (0.99–1.09), ALE–PLE ♂ 0.80 (0.58–0.80), ♀ 0.70 (0.64–0.70), ALE–PME ♂ 0.36 (0.30–0.40), ♀ 0.37 (0.29–0.37), AME diameter ♂ 0.32 (0.27–0.32), ♀ 0.31 (0.29–0.31); ratio ALE/AME ♂ 0.63 (0.56–0.71), ♀ 0.56 (0.56–0.67), ALE/PLE ♂ 1.00 (1.00–1.22), ♀ 1.00 (1.00–1.33), PME/PLE ♂ 0.30 (0.25–0.35), ♀ 0.25 (0.22–0.31).

Legs. Length of legs of the holotype ♂ and allotype ♀ as shown in Table 7.

Table 7. Measurement of leg segments of *Euophrys kataokai* sp. nov. (in mm; ♂/♀).

Leg	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	1.06/0.86	0.53/0.56	0.82/0.64	0.58/0.40	0.32/0.32	3.31/2.78
II	0.99/0.80	0.56/0.50	0.74/0.53	0.48/0.37	0.32/0.29	3.09/2.49
III	1.17/0.96	0.56/0.53	0.86/0.56	0.69/0.51	0.32/0.32	3.60/2.88
IV	1.36/1.04	0.58/0.50	0.96/0.77	0.86/0.74	0.38/0.43	4.14/3.48

Table 8. Spination of legs of *Euophrys kataokai* sp. nov. (dorsal/ventral; none=no spine, r=retrolateral, p=prolateral).

Leg		Femur	Patella	Tibia	Metatarsus
I	♂	0-1-1-2p/none	none/none	none/2-2-2	none/2-2
	♀	0-1-1-1•1p/none	none/none	none/2-2-2	none/2-2
II	♂	0-1-1-2p/none	none/none	0-1p-0/0-1r-2	0-2/2-2
	♀	0-1-1-1•1p/none	none/none	none/0-1r-2	none/2-2
III	♂	0-1-1•1p-3/none	none/none	2-2-0/0-1p-2	2-2/2-2p•2r
	♀	0-1-1-1•1p/none	none/none	0-1r-2/0-1p-1p	2-2/2-2p•2r
IV	♂	0-1-1-3/none	1r/none	2-2-2-0/0-1p-2	2-2-2/1p-0-2p•2r
	♀	0-1-1-1/none	none/none	0-2-2-0/0-1p-2	2-1r-2/2-0-2p•2r

Spination of legs of the same specimens as shown in Talbe 8.

Male palp (Figs. 18-20). The structure of palpal organ of this species is the same as in *E. frontalis* and both the species are indistinguishable in this character. However, condition of hair of the palp of this new species is characteristic. Cymbium yellow with orange hairs on dorsal side. Femur, patella and tibia yellow with orange hairs on retrolateral side and with white hairs on prolateral side.

Female genitalia (Figs. 21-23). The shape of genitalia of this species is the same as in *E. frontalis*, therefore both the species are indistinguishable in female.

Coloration and markings (Figs. 16-17, 24-27). Male: Prosoma brown with white hairs and black hairs, surroundings of eyes black with white and black hairs. Anterior eyes edged with orange hairs. Clypeus black, thickly covered with white hairs, the central part with brown setae. Sternum brown or yellowish brown with black hairs and black margin. Labium, maxillae and chelicerae brown or yellowish brown. Opisthosomal dorsum yellowish brown with black shevrons, covered with black hairs and weak white hairs, the anterior part with black setae, the margin with black hairs. Venter of opisthosoma yellowish brown with short black hairs and white weak hairs. Leg I (Figs. 24-27): Femur and patella yellow, tibia brown, dark brown or black, metatarsus dark brown or black, tarsus yellow without or with dark proximal bands. Orange hairs and orange setae present on dorsal and ventral surfaces of coxa, femur, patella, and tibia. Rows of scale-like black setae present on dorsal and ventral surfaces of metatarsus and tibia. Black hairs present on patella, tibia, metatarsus and tarsus. White hairs present on tarsus. Other legs yellow or brownish yellow.

Female: Same pattern as male, but, clypeus brown without hairs, opisthosoma and legs darker. Leg I brown without orange hairs and black setae.

Distribution. Japan (Honshu), Korea, China and Russia.

Remarks. Euophrys kataokai closely resembles *Euophrys frontalis* (WALCKENAER, 1802), and is indistinguishable in females, but can be distinguished from the latter in males by the following characteristics: Clypeus with white hairs; the first leg with

a row of scale-like black setae, orange hairs and orange setae (Figs. 24–28).

This species was wrongly identified with *Euophrys frontalis* and *Euophrys herbigrada* in Japan. The former records of this species from Japan were based on misidentifications.

Etymology. The species is dedicated to the late Mr. Sataro KATAOKA, Iwate Pref., who discovered the species in 1971.

Genus ***Talavera*** PECKHAM et PECKHAM, 1909

Talavera PECKHAM et PECKHAM, 1909. Type species: *Talavera minuta* (BANKS, 1895), from USA, Canada and Russia.

Diagnosis. Small spiders ranging from about 2.5 to 3 mm in length. Sexual dimorphism not marked. Male palpal organ: Cymbium simple; tibia without apophysis, embolus with well-developed distal haematodocha, tegulum with distal sclerite which forms a flat or rounded convexity on the distal part of tegulum; trajectory of sperm ducts complex; embolus straight or a little curved, connected to tegulum by a solid chitinous ligament. Epigynum: Generally simple, weakly sclerotized with internal structures usually visible through the integument; copulatory openings very small, paired, covered with either paired rounded lids or a single transvere chitinous fold; copulatory duct very thin, thread-like; spermathecae large, ovoid with lanceolate fertilization ducts.

Though *Euophrys* and *Talavera* resemble each other, LOGUNOV (1992) pointed out the difference between both the genera. The characteristics of the genera are shown in Table 9. Six species belong to this genus (LOGUNOV, 1992).

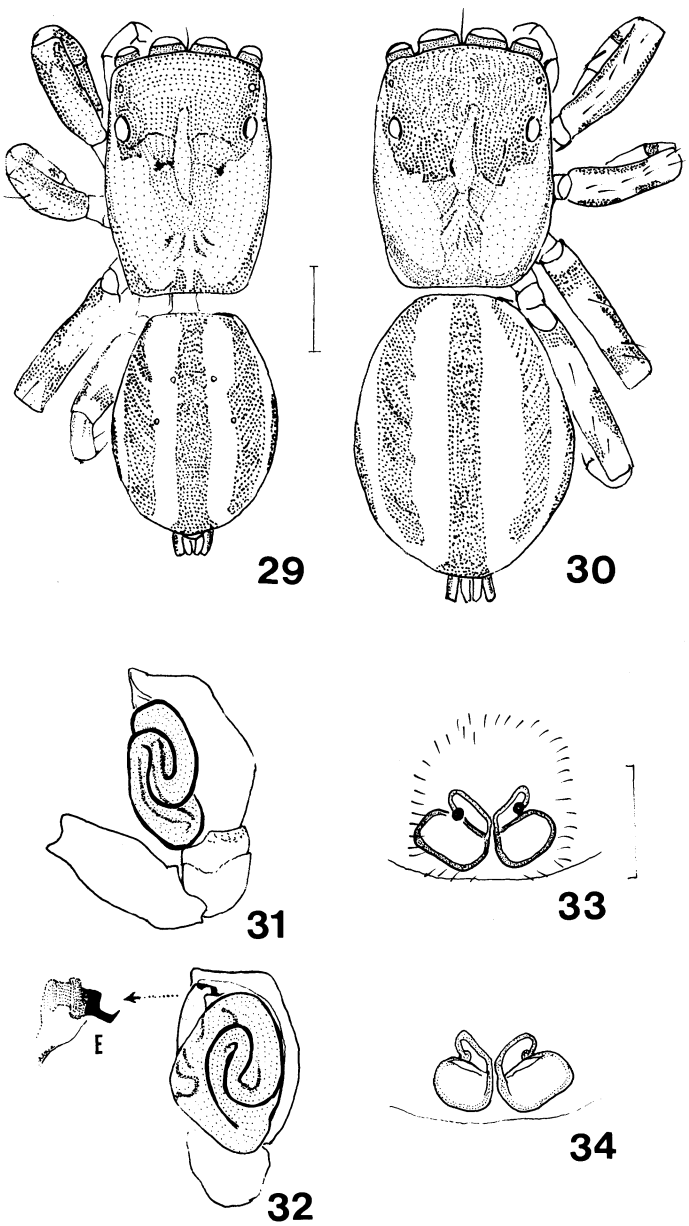
Talavera trivittata (SCHENKEL, 1963)
(Figs. 29–34)

Europhrys trivittata SCHENKEL, 1963, pp. 401–402, fig. 231.——WESOŁOWSKA, 1981, pp. 130–131, Figs. 8–9.——PAIK, 1986, pp. 19–22, figs. 1–10.
Euophrys trivittatus: SHINKAI & TAKANO, 1987, p. 119.
Talavera trivittata: LOGUNOV, 1992, p. 75.

Specimens examined. 1♂, Oikanae-numa, Taiki-cho, Hiro'o-gun, Hokkaido, 27-

Table 9. The characteristics of *Euophrys* and *Talavera* (after LOGUNOV, 1992).

Genus	*Euophrys*	*Talavera*
Male palp:		
tibial apophysis	present	absent
embolus	coiled	connected to tegulum by a solid ligament
distal sclerite	absent	present
sperm duct trajectory	simple	complex
Female genitalia:		
insemination ducts	spiral, twisted	thin, thread-like
Sexual dimorphism:	pronounced	indistinct
Distribution:	Palearctic	Holarctic



Figs. 29–34. *Talavera trivittata* (SCHENKEL, 1963).——29, Male, dorsal view; 30, female, dorsal view; 31, male palp, retrolateral view; 32, same, ventral view; 33, epigynum; 34, female genitalia, ventral view. E, embolus. (Scales: 29–30, 0.4 mm; 31–34, 0.2 mm.)

Table 10. Measurement of leg segments of *Talavera trivittata* (in mm; ♂/♀).

Leg	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	0.61/0.61	0.29/0.35	0.40/0.42	0.28/0.22	0.21/0.24	1.79/1.84
II	0.48/0.54	0.29/0.21	0.32/0.34	0.26/0.29	0.19/0.19	1.54/1.57
III	0.64/0.66	0.34/0.34	0.42/0.42	0.34/0.29	0.22/0.19	1.96/1.90
IV	0.64/0.69	0.26/0.34	0.50/0.48	0.40/0.42	0.29/0.22	2.09/2.15

Table 11. Spination of legs of *Talavera trivittata* (dorsal/ventral; none= no spine, r=retrolateral, p=prolateral).

Leg		Femur	Tibia	Metatarsus
I	♂	0-1-1-0/none	none/1-1-1	none/2-0
	♀	0-1-1-1p/none	none/2-2-2	none/2-2
II	♂	0-1-1-1/none	none/0-1-1	1r-2/2-2
	♀	0-1-1-1p/none	none/0-1-1	none/2-2
III	♂	1-0-1-1•1p/none	0-2-0/0-0-1	0-2/2-0-2p•2r
	♀	0-0-1-1/none	0-2-2-0/0-1-0-1	2-2/2-0-2p•2r
IV	♂	1-0-1-1/none	0-2-2/0-1-1	0-2/2-0-2p•2r
	♀	0-0-1-1/none	none/0-1-1	2-2/2-0-2p•2r

VI-11-VII, 1993, K. SHIBATA leg. (by pit fall trapping). 1 ♂, Osaki-chô, Toyota-gun, Hiroshima Pref., 17-VI-1993, Y. IHARA leg. (NSMT-Ar 3374); 2 ♀, same locality and collector, 16-VI-1993.

Description. Measurement of specimens from Hiroshima Pref. (in mm). Body length ♂ 2.27, ♀ 2.46; prosoma length ♂ 1.09, ♀ 1.15, width ♂ 0.84, ♀ 0.88, height ♂ 0.48, ♀ 0.56; opisthosoma length ♂ 1.04, ♀ 1.36, width ♂ 0.82, ♀ 1.06. Eye fields: ALE-ALE ♂ 0.70, ♀ 0.80, PLE-PLE ♂ 0.67, ♀ 0.80, ALE-PLE ♂ 0.45, ♀ 0.50, ALE-PME ♂ 0.20, ♀ 0.27, AME diameter ♂ 0.22, ♀ 0.24; ratio ALE/AME ♂ 0.57, ♀ 0.60, ALE/PLE ♂ 1.14, ♀ 1.13, PME/PLE ♂ 0.21, ♀ 0.25.

Legs. Length of legs of specimens from Hiroshima as shown in Table 10. Spination of legs of the same specimens as shown in Table 11.

Male palp (Figs. 31-32) with a small embolus curved and well-developed distal haematodocha, without tibial apophysis.

Female genitalia (Figs. 33-34). Epigynum simple, weakly sclerotized; internal structure visible through integument. Genital openings very small, spermathecae large.

Coloration and markings (Figs. 29-30). Male: Prosoma brownish yellow with white hairs, surroundings of eyes black with white haires, anterior parts black and anterior margin black with black hairs. Clypeus brown without hairs. Sternum blackish brown. Labium, maxillae and chelicerae yellowish brown or blakish brown with light margins. Opisthosomal dorsum pale yellow with three longitudinal blackish stripes, with many black setae and many white setae on anterior margin, lateral side with a same stripe, and covered with white hairs and black hairs. Venter of opisthosoma yellow with two blackish stripes and covered with weak white hairs. Legs I: Femur black, patella, tibia yellow with black distal parts, metatarsus yellow with black proximal parts, tarsus yellow. Legs II: Femur black especially on both lateral sides, other segments as same as leg I. Legs III and IV: Same as leg II except for tarsus with black proximal parts.

Female: Same pattern as male.

Distribution. Japan (Hokkaido, Honshu, Kyushu), Korea, China.

Remarks. *Talavera trivittata* can be easily distinguished from other congeners by the colour pattern.

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摘　　要

日本産ハエトリグモ科のカタオカハエトリグモ属 *Euophrys* に次の4種を認めた．*Euophrys erratica* (WALCKENAER, 1825) ヤガタハエトリ，*E. iwatensis* BOHDANOWICZ et PRÓSZYŃSKI, 1987 イワテハエトリ，*E. frontalis* (WALCKENAER, 1802) ウデグロカタオカハエトリ (新称)，*E. kataokai* sp. nov. カタオカハエトリ．なお，*Euophrys* 属は，イナズマハエトリグモ属と称してきた (八木沼，1986) が，イナズマハエトリは BOHDANOWICZ & PRÓSZYŃSKI (1987) に従って，*Pseudicius* 属に転属するのが適切であるので改称した．また，カタオカハエトリグモ属からヒメスジハエトリグモ属(新称)に転属された *Talavera trivittata* (SCHENKEL, 1963) ヒメスジハエトリの特徴を報じた．両属はそれぞれ色彩，斑紋，生殖器の構造，または雄の第I脚によって識別できる．

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